

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARTIN E. CIFUENTES, WILLIAM P. BRADY,
RANDALL G. SCHMIDT, WILLIAM J. SCHOENHERR, MICHAEL R. STRONG, BERNARD
VANWERT and GARY A. VINCENT

Appeal No. 95-1496
Application No. 08/076,615¹

ON BRIEF

Before JOHN D. SMITH, SCHAFER and WEIFFENBACH, Administrative Patent Judges.

SCHAFER, Administrative Patent Judge.

DECISION ON APPEAL

Applicants appeal from the rejection of claims 1 to 21, all the claims in the application.

¹ Application for patent filed June 11, 1993.

We have jurisdiction by virtue of 35 U.S.C. § 134.

We reverse.

The examiner relies on the following references in rejecting the claims:

Merrill U.S. Patent 4,753,977 Jun. 28, 1988

Hardman et al. (Hardman), "Silicones," reprinted from Encyclopedia of Polymer Science and Engineering, Vol. 15, Second Ed. (1989) pp. 218-219.

The examiner asserts three rejections:

1. The subject matter of claims 1-5 is rejected under 35 U.S.C. § 102(b) or, in the alternative, under § 103 as unpatentable over Merrill;
2. The subject matter of claims 6-9 and 17-19 is rejected under 35 U.S.C. § 103 as unpatentable over Merrill; and
3. The subject matter of claims 10-16, 20 and 21 is rejected under 35 U.S.C. § 103 as unpatentable over the combination of Merrill and Hardman.

In the answer, the examiner also refers to

Chung U.S. Patent 4,515,932 May 7, 1985

The Chung disclosure is incorporated by reference into the Merrill disclosure. Merrill, col. 3, lines 55-57.

The subject matter of the claimed invention relates to a moisture-curable hot melt pressure-sensitive adhesive composition. Claim 1 is representative:

1. A moisture-curable silicone hot melt pressure-sensitive adhesive composition comprising:
 - (i) a solid hydroxyl-functional organopolysiloxane resin comprising $R_3SiO_{1/2}$ siloxane units and $SiO_{4/2}$ siloxane units, wherein the mole ratio of the $R_3SiO_{1/2}$ siloxane units to $SiO_{4/2}$ siloxane units has a value of from 0.5/1 to 1.2/1, R is selected from the group consisting of hydrocarbon radicals and halogenated hydrocarbon radicals and said hydroxyl content is 1.2 to 6 percent by weight;

- (ii) a diorganopolysiloxane polymer, each terminal group thereof containing at least two silicon-bonded alkoxy radicals having 1-4 carbon atoms, said polymer having a viscosity at 25°C of 20 to <100,000 centipoise, and the weight ratio of said resin to said polymer being in the range 40:60 to 80:20;
- (iii) a silane of the formula R'_ySiX_y , in which R' is selected from the group consisting of hydrocarbon radicals and substituted hydrocarbon radicals having 1-6 carbon atoms, X is a hydrolyzable group and y is 2 to 4, the amount of said silane being sufficient to provide stability to said composition; and
- (iv) sufficient catalyst to accelerate the cure of said composition, said composition being an essentially solvent-free, non-slump solid at room temperature which cures to an essentially non-tacky elastomer upon exposure to moisture.

Applicants' Brief, p. 12.

As can be seen from the claim, the composition must include four components: (i) a solid hydroxyl-functional organopolysiloxane resin; (ii) a diorganopolysiloxane polymer; (iii) a silane; and (iv) a catalyst.

Applicants define the diorganopolysiloxane polymer (component (ii)) as follows:

The repeat units of the diorganopolysiloxane (ii) are $R_2SiO_{2/2}$ siloxy units wherein R is independently selected from the same hydrocarbon and halogenated hydrocarbon radicals delineated above for component (i).

Specification, p. 9. Applicants define "R" to be limited to hydrocarbon or halogenated hydrocarbon.

Thus, their specification says R is

a monovalent radical selected from the group consisting of hydrocarbon and halogenated hydrocarbon radicals, preferably having less than 20 carbon atoms, and most preferably having from 1 to 10 carbon atoms. Examples of suitable R radicals include alkyl radicals, such as methyl, ethyl, propyl, pentyl, octyl, undecyl and octadecyl; cycloaliphatic radicals, such as cyclohexyl; aryl radicals such as phenyl, tolyl, xylyl, benzyl, alpha-methyl styryl and 2-phenylethyl; alkenyl radicals such as vinyl; and chlorinated hydrocarbon radicals such as 3-chloropropyl and dichlorophenyl.

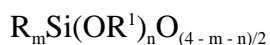
Specification, p. 6.

Merrill² relates to a composition which is said to provide a water repellant and stain resistant coating. Merrill teaches a composition having three required components:

- (a) organopolysiloxane resin;
- (b) an alkylalkoxypolysiloxane resin; and
- (c) a condensation catalyst.

Merrill, col. 2, line 52 - col. 3, line 1. Optionally, a fourth component may be included --an alkoxy crosslinking agent. Merrill, col. 3, lines 2-3. Merrill defines the repeating units of the alkylalkoxypolysiloxane resin (component (b)) as follows:

Alkyl-alkoxypolysiloxane resins contemplated for use in the present invention contain units of the general formula:



where m is 0, 1 or 2; n is 1, 2 or 3; m+n is 1, 2 or 3; R¹ is a substituted or unsubstituted condensable hydrocarbon radical of from 1 to 6 carbon atoms, preferably methyl; R is a substituted or unsubstituted monovalent hydrocarbon radical of from 1 to 8 carbon atoms preferably methyl; and fewer than 20% by number of all siloxane units are SiO₂ units.

Merrill, col. 3, lines 35-47.

All of the rejections are dependant upon the examiner's finding that Merrill's alkyl-alkoxypolysiloxane resin (component (b)) describes applicants' diorganopolysiloxane polymer (component (ii)). The examiner finds:

Merrill teaches [a] water repellant [composition] for masonry which comprises, . . . , an alkyl-alkoxypolysiloxane as shown on column 3, line 63

Examiner's Answer, p. 2. However, applicants' and Merrill's respective definitions of the repeating units of diorganopolysiloxane polymer and alkyl-alkoxypolysiloxane resin precludes a finding that these components are the same. As we indicated above, applicants define the repeating units of the

² Our disposition of the case does not require the discussion of the Hardman reference.

diorganopolysiloxane polymer as $R_2SiO_{2/2}$ siloxy units. Specification, p. 9. R is defined as hydrocarbon or halogenated hydrocarbon. Specification, p. 6. On the other hand, Merrill defines the repeating units of the alkylalkoxypolysiloxane resin as $R_mSi(OR^1)_nO_{(4-m-n)/2}$. Merrill, col. 3, lines 35-47. In Merrill's formula "n" is defined as 1, 2, or 3. Merrill, col. 3, lines 41. Thus, Merrill's definition requires the presence of at least one alkoxy (OR^1) group. Applicants' definition of their diorganopolysiloxane polymers does not allow the presence of an (OR^1) group. R in applicants' diorganopolysiloxane polymers is limited to hydrocarbon or halogenated hydrocarbon. Therefore, we find that Merrill does not teach applicants' component (ii). Since the rejection of all claims is dependent on the examiner's finding that Merrill teaches diorganopolysiloxane polymers within the scope of applicants' claims, we reverse the rejections of claims 1 to 21.

REVERSED

JOHN D. SMITH)	
Administrative Patent Judge)	
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RICHARD E. SCHAFER)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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CAMERON WEIFFENBACH)	
Administrative Patent Judge)	

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